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ABSTRACT

This document is a catalog of products available for use in an SCSD-type building system for educational facilities and related building types. Extensive information is presented about products in the four building subsystems of (1) structure, (2) heating/ventilating/cooling, (3) integrated lighting/ceiling, and (4) demountable and portable partitions. The presentation format consists of product performance data charts and lists of manufacturer addresses and contacts for product lines. The compatibility of these products is then presented graphically in three matrixes, one of which identifies 811 fully compatible building systems composed of products from the four subsystems. (Author)

ED057456

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Building Systems Information C

Special Report Number

MANUFACTUR
COMPATIBILITY

Third Edition, September

Published by

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Educational Facilities Laboratories
3000 Sand Hill Road
Menlo Park, California 9402

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Special Report Number One

MANUFACTURERS' COMPATIBILITY STUDY

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Educational Facilities Laboratories, Inc.
3000 Sand Hill Road
Menlo Park, California 94025

BSIC/EFL

Building Systems Information Clearinghouse was established by Educational Facilities Laboratories to undertake research on matters pertaining to the development and use of building systems; accumulate and distribute information about systems projects to architects, educators, and manufacturers; and to serve as a medium to encourage communication among those interested in building systems.

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INTRODUCTION

The third edition of the *Manufacturers' Compatibility Study* has been revised in response to the suggestions of architects, school planners and manufacturers who have used the previous editions. We are indebted to those who offered their help in making this a more useful document. While it was not possible to include all of the types of information suggested, we have broadened the publication's scope somewhat to include more definitive data on testing, provide a more graphic presentation of data whenever possible, and gone to a uniform 8½ x 11 format for all pages in the publication.

BSIC had hoped to include at least one additional subsystem, electric/electronic, in this edition. However, we found that information on such products was not yet complete enough for inclusion at this time. We have, however, listed the names of manufacturers producing this subsystem as a source of additional information for our readers. In addition, we have included for the first time a list of organizations who offer partial building systems composed of products made by a number of manufacturers in several subsystem categories.

Although on one project or another as many as fourteen subsystems have been combined into a building system, BSIC has chosen to limit this catalog to four subsystems which are the major contributors to the building's form and function. These are:

1. The *structural subsystem* gives the building its general form and sets the basic modular pattern.
2. The *mechanical* or *HVC subsystem* provides thermal control and comfort.
3. The *lighting/ceiling subsystem* provides lighting, acoustical control, possible fire protection for the structure and support for partitions and other components and may provide for supply and return of treated air.
4. The *partition* or *interior space division subsystem* provides interior visual and acoustical control with a potential for change of spatial organization.

In preparing the new catalog, BSIC has selected data for inclusion and a method of presentation that will:

1. provide basic information in comparable form about the products available in each of four subsystems.
2. identify product compatibility with interfacing subsystems.
3. identify the manufacturer's representative who may be contacted for additional information.

4. stimulate manufacturer, architect, and engineer thinking about the problems of compatibility.

BSIC has relied upon the manufacturers to provide the data about their products. Unless otherwise indicated, all data has been examined, completed, and checked by the product manufacturer. BSIC, therefore, assumes no responsibility as to the accuracy of any claims made by a manufacturer for his product.

Contents of the catalog

This catalog contains three types of information.

1. Charts of data about the performance characteristics of the products available in each of the four subsystems.
2. Lists of manufacturer contacts for each of the products. The list for each subsystem follows the subsystem data chart.
3. Three matrices which show compatibility between products of the various subsystems. Matrix I shows the compatibility between structure, HVC, and lighting/ceiling products. Matrix II relates partitions and lighting/ceiling products. Matrix III shows products from each of the four subsystems that may be combined to produce fully compatible building systems.

The designation of compatibility between products was determined based on the following criteria:

Fully compatible, details of interfacing between products have been worked out and are available from the manufacturer; and these interfacing details have been tested by using the products together on one or more projects. Also, in order to be so classified, both manufacturers had to claim full compatibility.

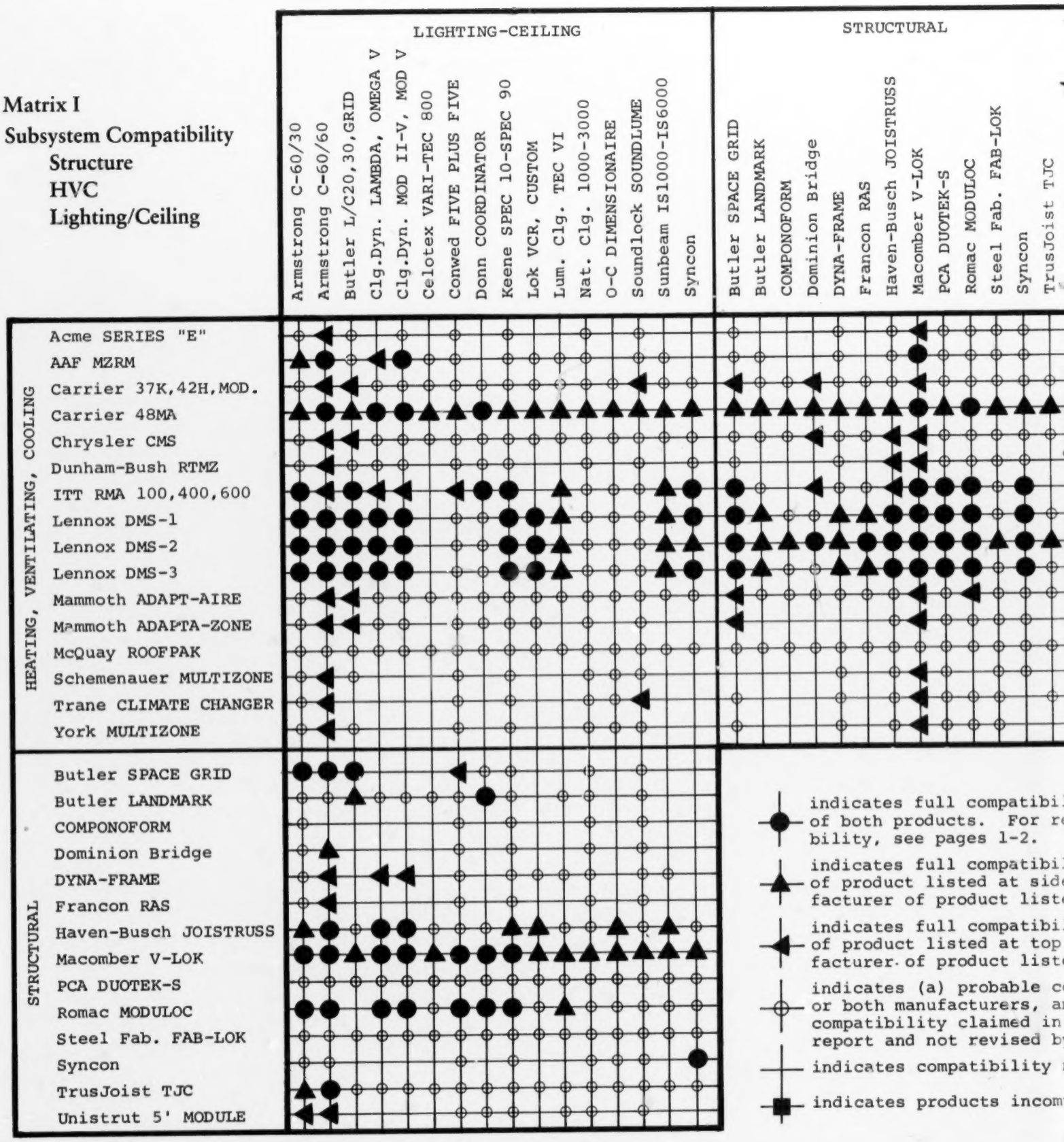
BSIC has not attempted to include cost data in this catalog. The number of cost variables—regional prices, project location, size and variety of possible installations, etc.—make such data of little use. Manufacturers' representatives who are the best source for such information are prepared to furnish cost data for specific projects.

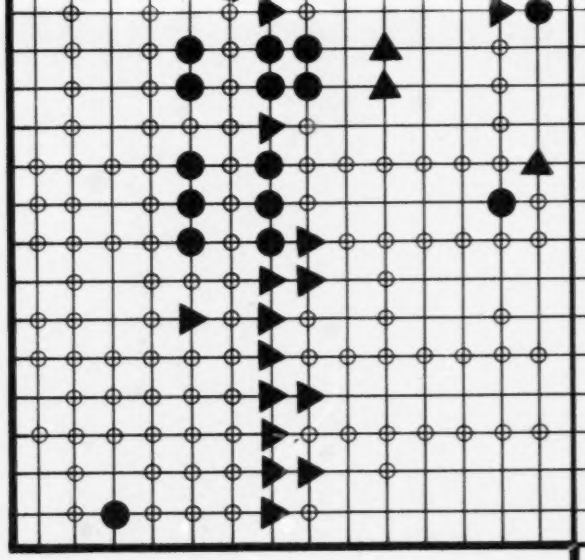
This catalog together with its companion publication Special Report Number Three: *Building Systems Planning Manual* are designed to provide the basic information necessary to use building systems. BSIC will welcome suggestions from catalog users about ways to improve the usefulness of these publications.

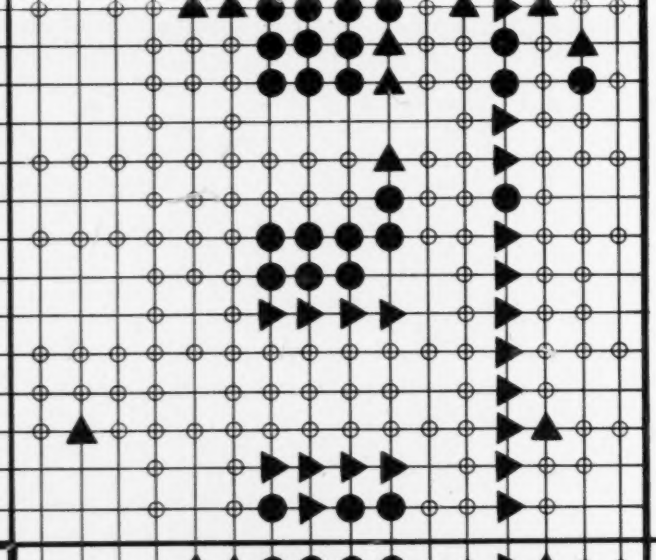
Matrix I

Subsystem Compatibility

- Structure
- HVC
- Lighting/Ceiling

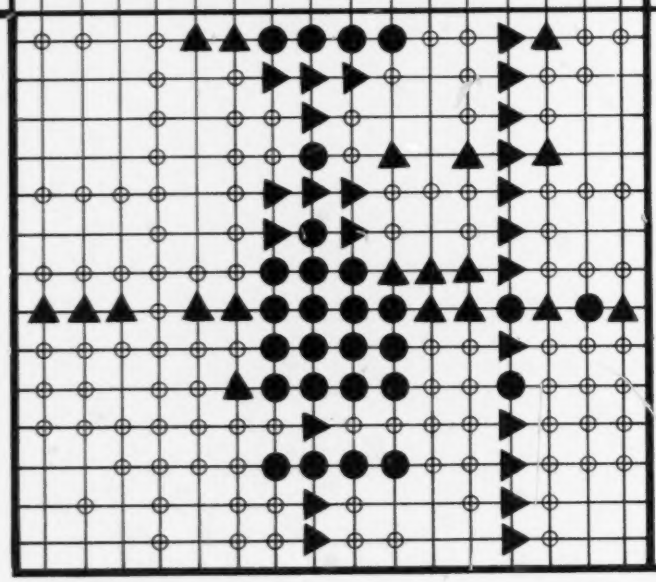






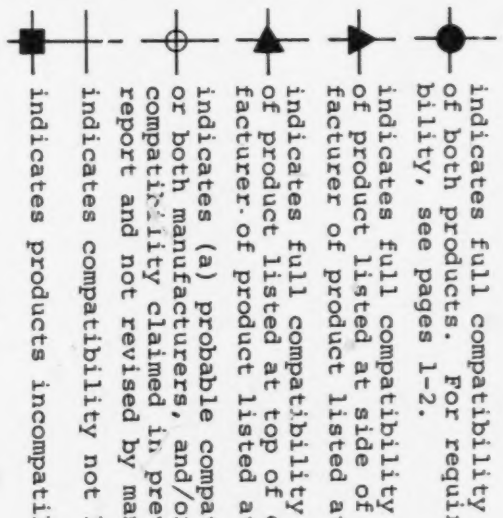
LIGHTING-CEILING

Butler L/C20,30,GRID
Clg.Dyn. LAMBDA, OMEGA V
Clg.Dyn. MOD II-V, MOD V
Celotex VARI-TEC 800
Conwed FIVE PLUS FIVE
Donn COORDINATOR
Keene SPEC 10-SPEC 90
Lok VCR, CUSTOM
Lum. Clg. TEC VI
Nat. Clg. 1000-3000
O-C DIMENSIONAIRE
Soundlock SOUNDLUME
Sunbeam IS1000-IS6000
Syncon



STRUCTURAL

Butler SPACE GRID
Butler LANDMARK
COMPONOFORM
Dominion Bridge
DYNA-FRAME
Francon RAS
Haven-Busch JOISTRUSS
Macomber V-LOK
PCA DUOTEK-S
Romac MODULOC
Steel Fab. FAB-LOK
Syncon
TrusJoist TJC
Unistrut 5' MODULE



indicates full compatibility claimed by manufacturers of both products. For requirements of full compatibility, see pages 1-2.

indicates full compatibility claimed by manufacturer of product listed at side of chart but not by manufacturer of product listed at top of chart.

indicates full compatibility claimed by manufacturer of product listed at top of chart but not by manufacturer of product listed at side of chart.

indicates (a) probable compatibility claimed by one or both manufacturers, and/or (b) probable or full compatibility claimed in previous edition of this report and not revised by manufacturer(s).

indicates compatibility not known or data missing.

indicates products incompatible.

STRUCTURAL SUBSYSTEM PRODUCT DATA I

| PRODUCT DESIGNATION

NOTE: All structural subsystem products listed on this chart have a horizontal planning module of 5'-0" by 5'-0". | MAJOR MATERIAL | HORIZONTAL STRUCTUR | | |

YSTEM PRODUCT DATA I

MAJOR ATERIAL	HORIZONTAL STRUCTURE						
	DEPTH	FLOOR			ROOF		
		LIVE LOAD (psf)	PRIMARY SPANS 10 20 30 40	SECONDARY SPANS 10 20 30 40 50 60 70 80	LIVE LOAD (psf)	PRIMARY SPANS 10 20 30 40	SECONDARY SPANS 10 20 30 40 50 60 70 80 90 100 110
Steel	35" 41"	Max. 170			Max. 63		
Steel	36" 48"				12-40		
recast oncrete	12"- 24"						
Steel	16" 18" 36"	100 100 100			 40 40		
recast oncrete	16"- 36"	25-250			25-250		
recast oncrete	48"	Max. 150			Max. 40		
Steel	36"- 48"	40-200			20-50		
Steel	36" 60"	40-100			20-50 20-50		
recast oncrete	48"	Max. 100			Max. 100		
Steel	32" 36" 60"	Max. 150			20-50 20-50		
Steel	32" 36" 48" 60"	As reqd. As reqd. As reqd.			As reqd. As reqd. As reqd.		
Steel	36"	Max. 100			Max. 30		
ood and steel	34"- 48" 38"- 60"	50-100 50-100			20-100		
Steel	50¼"				20-45		

Most economic bay size(s)

Range of spans available

STRUCTURAL SUBSYSTEM PRODUCT DATA II

HORIZONTAL STRUCTURE			VERTICAL STRUCTURE					LATERAL FORCE RESISTANCE
DEPTH	LARGEST DUCT THROUGH SECONDARY SPANNING MEMBER	CANTILEVERS	MODULE	CEILING HEIGHTS	ELEMENTS		NUMBER OF STORIES	
					Bearing walls	COLUMNS		Moment frame / Shear walls / Cross bracing
	20"o.d.	2.5' to 12.5'	12"	8' to 12',14' 16',20'		8" tube	4	●
36" 48"	20"o.d. 26"o.d.		12"	9' to 25'		6"x11"H to 12"x14"H	1	●
			As reqd.	As reqd.		12"x12" to 32"x32"		● ●
18"	12"x12"	No	12"	10',14'		8" tube	4	●
		.25 to .33 of interior span	As reqd.	As reqd.	○	As reqd	30	● ● ●
48"	16"x40" (primary only)	No		9'-4",13'-4", 17'-4",22'-0"		12"x12"	3	●
36"	21"o.d.	Yes	As reqd.	As reqd.	○	6"-10"tube, 12" WF		● ●
36"	14"x20"	Yes	As reqd.	Recommended 9',10'		5",6",8" tube or WF	2-3	●
48"	14"x28"	No	48"	10',14',18', 24'		12"x12"	5	●
		Yes	As reqd.	Recommended 9',10'	○	5"-12"tube or WF	5	●
32" 36"	22"o.d.	Yes	As reqd.	9' to 30'	○	5"-12"tube or WF	4	●
		Primary only	As reqd.	Max. 16'	○	Cruciform 12"x12"	2	● ●
	18" to 26"o.d.	1/3 of span	As reqd.	As reqd.	○	As reqd.	2	
50¼"	30"o.d.	2.5' to 32.5'	As reqd.	As reqd.	○	As reqd.	1	●

● Subsystem component

○ Nonsystem component

TEM PRODUCT DATA II

LEVERS	VERTICAL STRUCTURE: MODULE	VERTICAL STRUCTURE: CEILING HEIGHTS	VERTICAL STRUCTURE: ELEMENTS: Bearing walls	VERTICAL STRUCTURE: ELEMENTS: COLUMNS	VERTICAL STRUCTURE: NUMBER OF STORIES	LATERAL FORCE RESISTANCE: Moment frame	LATERAL FORCE RESISTANCE: Shear walls	LATERAL FORCE RESISTANCE: Cross bracing	FIRE RESISTANCE: RATING	FIRE RESISTANCE: TEST	PRODUCT DESIGNATION
to 12.5'	12"	8' to 12',14' 16',20'		8" tube	4	●					Butler SPACE GRID
	12"	9' to 25'		6"x11"H to 12"x14"H	1	●					LANDMARK
	As reqd.	As reqd.		12"x12" to 32"x32"		●	●				COMPONOFORM
No	12"	10',14'		8" tube	4			●			Dominion Bridge
o .33 of ior span	As reqd.	As reqd.	○	As reqd	30	●	●	●	3 hr	⬡	DYNA-FRAME
No		9'-4",13'-4", 17'-4",22'-0"		12"x12"	3	●			3 hr	⬢	Francon RAS
Yes	As reqd.	As reqd.	○	6"-10"tube, 12" WF		●		●			Haven-Busch JOISTRUSS
Yes	As reqd.	Recommended 9',10'		5",6",8" tube or WF	2-3	●					Macomber V-LOK
No	48"	10',14',18', 24'		12"x12"	5		●		3 hr	⬡	PCA DUOTEK-S
Yes	As reqd.	Recommended 9',10'	○	5"-12"tube or WF	5	●					Romac MODULOC
Yes	As reqd.	9' to 30'	○	5"-12"tube or WF	4	●					Steel Fabricators FAB-LOK
ry only	As reqd.	Max. 16'	○	Cruciform 12"x12"	2	●	●				Syncon SYNCON
f span	As reqd.	As reqd.	○	As reqd.	2				1 hr	⬢	TrusJoist TJC
to 32.5'	As reqd.	As reqd.	○	As reqd.	1	●					Unistrut 5' MODULE

● Subsystem component
○ Nonsystem component
⬢ Tested by independent agency
⬡ Tested "in-house"

Manufacturers of Structural Subsystems.

1. Product: SPACE GRID
   Contact: Donald H. Worden
   Space Grid Product Manager
   (816) 231-7400
   Manufacturer: Butler Manufacturing Company
   P.O. Box 917
   Kansas City, Missouri 64141

2. Product: LANDMARK
   Contact: Edward S. Polak
   Landmark—Products Manager
   (816) 968-3465
   Manufacturer: Butler Manufacturing Company
   P.O. Box 917
   Kansas City, Missouri 64141

3. Product: COMPONOFORM
   Contact: Philippe Charat
   (617) 868-9500
   Manufacturer: COMPONOFORM, Inc.
   15 Brattle Street
   Cambridge, Mass. 02138

4. Product: DOMINION BRIDGE
   Contact: D. H. Kennedy
   Manager Development Engineering
   (514) 634-3551
   Manufacturer: Dominion Bridge Company Limited
   P.O. Box 280
   Montreal 101, Quebec, Canada

5. Product: DYNA-FRAME
   Contact: W. C. Hart
   Stresscon Industries
   (301) 327-7703
   Manufacturer: C. W. Blakeslee and Sons
   58 Waverly Street
   New Haven, Conn. 06507

   Dyna Frame of Florida, Inc.
   P.O. Box 17195
   Tampa, Florida 33612

   Granite Research Industries, Inc.
   26 Chestnut Street
   Somerville, Mass. 02143

   Neville Cement Products Corp.
   2730 Neville Road
   Pittsburgh, Pennsylvania

   Price Brothers Company
   40 S. Main Street
   Dayton, Ohio 45401

   Stresscon Industries, Inc.
   3501 Sinclair Lane
   Baltimore, Maryland 21213

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4: Product: DOMINION BRIDGE
Contact: D. H. Kennedy
Manager Development Engineering
(514) 634-3551
Manufacturer: Dominion Bridge Company Limited
P.O. Box 280
Montreal 101, Quebec, Canada

5. Product: DYNA-FRAME
Contact: W. C. Hart
Stresscon Industries
(301) 327-7703
Manufacturer: C. W. Blakeslee and Sons
58 Waverly Street
New Haven, Conn. 06507

Dyna Frame of Florida, Inc.
P.O. Box 17195
Tampa, Florida 33612

Granite Research Industries, Inc.
26 Chestnut Street
Somerville, Mass. 02143

Neville Cement Products Corp.
2730 Neville Road
Pittsburgh, Pennsylvania

Price Brothers Company
40 S. Main Street
Dayton, Ohio 45401

Stresscon Industries, Inc.
3501 Sinclair Lane
Baltimore, Maryland 21213

6. Product: RAS STRUCTURAL SYSTEM
Contact: Jacques Barette
Manager, Sales and Promotion
Prestressed Concrete Division
(514) 722-2511
Manufacturer: Francon Limitee
C. P. 2000 Rosemont
Montreal 405, Quebec, Canada

7. Product: JOISTRUSS
Sweet's Ref: 5.4/Ha
Contact: John H. Busch
Executive Vice President
(616) 532-3641
Manufacturer: Haven-Busch Company
3443 Chicago Drive, S.W.
Grandville, Michigan 49418

8. Product: V-LOK
Sweet's Ref: 5.4/Ma
Contact: Bernard E. Cromi
Vice President—Sales
(216) 456-2841
Manufacturer: Macomber, Inc.
Box 8830
Canton, Ohio 44711

Manufacturers of Structural Subsystems (Continued).

9. Product: DUOTEK-S
   Sweet's Ref: 3.4/Po
   Contact: Richard P. Geyser, AIA
   National Coordinator for Building Systems
   (312) 966-6200
   Manufacturer: Portland Cement Association
   Old Orchard Road
   Skokie, Illinois 60076

10. Product: MODULOC
    Contact: Thomas J. Cloonan
    Vice President
    (813) 936-8153
    Manufacturer: Romac Steel Company, Inc.
    Villas Industrial Park
    P.O. Box 5085—South Station
    Fort Myers, Florida 33902

11. Product: FAB-LOK
    Contact: Donald H. Sea
    Sales Engineer
    (305) 772-0440
    Manufacturer: Steel Fabricators Inc.
    P.O. Box 23219
    Fort Lauderdale, Florida 33307

12. Product: SYNCON
    Contact: Joseph C. White
    Douglas C. Rhyn
    (414) 671-1180
    Manufacturer: SYNCON
    1717 South 12th Street
    Milwaukee, Wisconsin 53204

13. Product: TJC
    Contact: William E. Welch
    Division Manager
    (503) 639-8826
    Manufacturer: Trus Joist Corporation
    P.O. Box 25307
    Portland, Oregon 97225

14. Product: UNISTRUT 5' MODULE SPACEFRAME
    Sweet's Ref: 5.4/Un
    Contact: Sun Chien Hsiao
    Architect
    (313) 721-4040
    Manufacturer: Unistrut Corporation
    4118 S. Wayne Road
    Wayne, Michigan 48184

ntinued).

12. Product: SYNCON
    Contact: Joseph C. White
    Douglas C. Rhyn
    (414) 671-1180
    Manufacturer: SYNCON
    1717 South 12th Street
    Milwaukee, Wisconsin 53204

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    Division Manager
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    Manufacturer: Trus Joist Corporation
    P.O. Box 25307
    Portland, Oregon 97225

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    Sweet's Ref: 5.4/Un
    Contact: Sun Chien Hsiao
    Architect
    (313) 721-4040
    Manufacturer: Unistrut Corporation
    4118 S. Wayne Road
    Wayne, Michigan 48184

Other Structural Subsystems Manufacturers.

1. Manufacturer: Houdaille-Duval-Wright
   P. O. Box 8068
   1050 N. E. Fifth Terrace
   Fort Lauderdale, Florida 33310
   Contact: Walter Hiis
   (305) 525-1771

2. Manufacturer: Inland-Ryerson Construction Products Co.
   Dept. 5
   4033 West Burnham Street
   Milwaukee, Wisconsin 53201
   Contact: Britt Clair, Manager
   Systems Construction
   (414) 383-4030
   Sweet's Ref: 5.4/In

HEATING/VENTILATING/COOLING SUBSYSTEM PRODUCT DATA I

PRODUCT DESIGNATION		GENERIC TYPE			UNIT LOCATION			SIZE OF UNIT[1]				CONTROL ZONES PER UNIT	OUT
		Self contained	Terminal unit	Multizone	Single zone	Double duct	Rooftop	Equipment space	Above ceiling	Length	Width	Height	Weight (pounds)		(M
Acme SERIES "F"		●	○	●	●	●	●			11'-8" 25'-9"	7'-0"	3'-7"	4100 6500	2-12	
AAF MZRM		●	○	●			●			22'-1"	7'-8"	4'-2"	Min. 2780	10-12	338
Carrier	37K	○	●		●				●	1'-5" 4'-11"	2'-1"	0'-9"	83	1	
	42H	○	●		●				●	7'-8"	1'-8"	0'-9"	112	1	
	48MA	●		●			●			17'-11"	7'-3"	3'-0"	3970	10	
	MODULINE	○	●	●	●				●	4'-0" 25'-0"	1'-0"	1'-4"	65 70	1-5	
Chrysler CMS			●	●				●		4'-0" 6'-0"	2'-6"	5'-5" 6'-6"	698 1100	4-8	9
Dunham-Bush RTMZ		●	○	●			●			21'-4" 26'-2"	5'-10" 7'-6"	4'-0" 4'-6"	3200 6900	12-16	5
ITT	RMA 100	●	○	●			●			20'-0"	7'-8"	3'-6"	3500 5800	Max. 12	30
	RMA 400-600	●	○	●	●		●			26'-6"	9'-10"	4'-6"	8000 9500	Max. 20	60
Lennox	CBW-3,4,5		●		●			●	●	1'-10" 6'-1"	1'-11" 7'-9"	0'-10" 3'-0"	42 1550	1	
	DMS-1	●	○	●		○	●			18'-4"	7'-9"	3'-6"	Min. 2500	2-12	10
	DMS-2	●	○	●		○		●		7'-8"	4'-10"	7'-3"		2-12	10
	DMS-3	●	○	●		○	●			26'-4"	7'-9"	5'-2"	Min. 5123	2-18	30

NOTES:
1. Size given is for largest unit unless otherwise specified. Where two figures are given, upper figure is smallest and lower figure is largest in range.
2. Output range is for all five energy sources, for specific source, consult manufacturer.
3. Cooling output figures are rounded to nearest whole MBh or ton.

TING/COOLING SUBSYSTEM PRODUCT DATA I

GENERIC TYPE				UNIT LOCATION			SIZE OF UNIT[1]				CONTROL ZONES PER UNIT	HEATING						COOLING OUTPUT[3]	AIR VOLUME
Self contained	Terminal	Multizone	Single zone	Double duct	Rooftop	Equipment space	Above ceiling	Length	Width	Height	Weight (pounds)		OUTPUT[2] (MBh)	ENERGY SOURCE					(tons)	(cfm/unit)
														Gas	Electricity	Oil	Hot water	Steam		
●	○	●	●	●	●			11'-8" 25'-9"	7'-0"	3'-7"	4100 6500	2-12	505	●	●		●	●	15-35	6000-13000
●	○	●			●			22'-1"	7'-8"	4'-2"	Min. 2780	10-12	338- 700	●	●		●	●	17-33	4000-11000
○	●		●				●	1'-5" 4'-11"	2'-1"	0'-9"	83	1	2- 69		●		●	●	1-24 MBh	75- 900
○	●		●				●	7'-8"	1'-8"	0'-9"	112	1	3- 131		●		●	●	3-44 MBh	200- 1200
●		●			●			17'-11"	7'-3"	3'-0"	3970	10	450	●					300 MBh	12000
○	●	●	●				●	4'-0" 25'-0"	1'-0"	1'-4"	65 70	1-5	0- 57	●	●	●	●	●	4-40 MBh	100- 1250
	●	●				●		4'-0" 6'-0"	2'-6"	5'-5" 6'-6"	698 1100	4-8	93- 225				●		3-10	1200- 4000
●	○	●			●			21'-4" 26'-2"	5'-10" 7'-6"	4'-0" 4'-6"	3200 6900	12-16	58-1300	●	●		●	●	10-40	3460-15120
●	○	●			●			20'-0"	7'-8"	3'-6"	3500 5800	Max. 12	300-1000	●	●		●	●	17-32	4000-11500
●	○	●	●		●			26'-6"	9'-10"	4'-6"	8000 9500	Max. 20	600-1300	●	●		●	●	41-62	12000-20000
	●		●			●	●	1'-10" 6'-1"	1'-11" 7'-9"	0'-10" 3'-0"	42 1550	1	5- 260		●		●		1-25	59-15500
●	○	●		○	●			18'-4"	7'-9"	3'-6"	Min. 2500	2-12	100- 700	●	●		●		8-22	5000-10500
●	○	●		○		●		7'-8"	4'-10"	7'-3"		2-12	100- 820	●	●		●	●	16,22	5000-10500
●	○	●		○	●			26'-4"	7'-9"	5'-2"	Min. 5123	2-18	300-1110	●	●		●	●	33	5000-15000

s for largest unit unless otherwise specified. Where two given, upper figure is smallest and lower figure is ange.

is for all five energy sources, for specific source, facturer.

ut figures are rounded to nearest whole MBh or ton.

● Preferred

○ Alternate

Manufacturers of Heating, Ventilating and Cooling Subsystems.

1. Product: SERIES "F" MULTIZONE
   Contact: R. L. Bishop
   General Product Manager
   (517) 787-1001
   Manufacturer: Acme Industries, Inc.
   600 North Mechanic Street
   Jackson, Michigan 49202

2. Product: MZRM
   Contact: Robert A. Vogt
   Manager, Environmental
   Systems Construction
   (502) 637-0011
   Manufacturer: American Air Filter Company, Inc.
   215 Central Avenue
   Louisville, Kentucky 40208

3. Product: (1) 37K
   (2) 42H
   (3) 48MA MULTIZONE
   (4) MODULINE
   (5) DUAL MODULINE
   Sweet's Ref: 15.7/Car
   Contact: Ned R. Mann
   Systems Sales Promotion Manager
   (315) 463-8411
   Manufacturer: Carrier Air Conditioning Company
   Carrier Parkway
   Syracuse, New York 13201

4. Product: COMFORT MODULE SYSTEM
   Sweet's Ref: 15.7/Air
   Contact: R. B. Stotz
   G. O. Pringle, Ext. 2369
   (513) 461-5100
   Manufacturer: Airtemp Division
   Chrysler Corporation
   P. O. Box 1205
   Dayton, Ohio 45401

5. Product: RTMZ
   Contact: Deane R. Keuch
   Executive Director—Accounts
   (212) 361-7795
   Manufa :r: Dunham-Bush, Inc.
   29-28 41st Avenue
   Long Island City, New York 11101

Cooling Subsystems.

4. Product: COMFORT MODULE SYSTEM
   Sweet's Ref: 15.7/Air
   Contact: R. B. Stotz
   G. O. Pringle, Ext. 2369
   (513) 461-5100
   Manufacturer: Airtemp Division
   Chrysler Corporation
   P. O. Box 1205
   Dayton, Ohio 45401

5. Product: RTMZ
   Contact: Deane R. Keuch
   Executive Director—Accounts
   (212) 361-7795
   Manufacturer: Dunham-Bush, Inc.
   29-28 41st Avenue
   Long Island City, New York 11101

6. Product: (1) RMA 100
   (2) RMA 400-600
   Contact: Sam Miller
   Manager Systems Buildings
   George L. Weigle
   Product Manager
   (215) 332-2400
   Manufacturer: ITT Environmental Products Division
   State Road and Rhawn Street
   Philadelphia, Pennsylvania 19136

7. Product: (1) CBW-3, 4, 5
   (2) DMS-1
   (3) DMS-2
   (4) DMS-3
   Sweet's Ref: 15.7/Le
   Contact: Norman L. Rutgers
   Assistant to the President
   (515) 754-4214
   Ted Gilles
   Lennox Industries
   750 Welch Road
   Palo Alto, California 94304
   (415) 325-2483
   Manufacturer: Lennox Industries Inc.
   200 South 12th Street
   Marshalltown, Iowa 50158

HEATING/VENTILATING/COOLING SUBSYSTEM PRODUCT DATA

PRODUCT DESIGNATION	GENERIC TYPE				UNIT LOCATION			SIZE OF UNIT[1]				CONTROL ZONES PER UNIT
	Self contained	Terminal unit	Multizone	Single zone	Double duct	Rooftop	Equipment space	Above ceiling	Length	Width	Height	Weight (pounds)	
Mammoth ADAPT-AIRE	●	○		●		●			22'-0"	6'-10"	5'-7"	8800	1
ADAPT-AIRE	●	○	●			●			22'-0"	6'-10"	5'-7"	9000	Max. 12
ADAPTA-TEMP	●			●		●			8'-9"	4'-0"	3'-1"	1400	1
ADAPTA-ZONE	●	○	●			●			20'-0"	7'-8"	3'-8"	4800	Max. 14
MAMMOTH-AIRE	●	○	●			●			24'-7"	20'-5"	8'-9"	30000	Max. 27
SZ SERIES	●	○		●		●			7'-5"	13'-0"	4'-0"	4000	1
McQuay ROOFPAK	●	○	●		○	●			20'-0"	7'-10"	4'-1"	4870 5975	12
Schemenauer MULTIZONE	●		●			●			20'-0" 22'-8"	6'-9" 7'-8"	4'-3"	4500 6950	2-12
Trane CLIMATE CHANGER		●	●			●	●		6'-5" 7'-2"	6'-0" 9'-7"	7'-1" 8'-5"	3000 6000	2-14
York MULTIZONE	●		●			●			17'-4"	7'-10"	4'-11"	3900 4350	2-12

NOTES:
1. Size given is for largest unit unless otherwise specified. Where two figures are given, upper figure is smallest and lower figure is largest in range.
2. Output range is for all five energy sources, for specific source, consult manufacturer.
3. Cooling output figures are rounded to nearest MBh or ton.

G/COOLING SUBSYSTEM PRODUCT DATA II

IC TYPE			UNIT LOCATION			SIZE OF UNIT[1]				CONTROL ZONES PER UNIT	HEATING						COOLING OUTPUT[3]	AIR VOLUME
Multizone	Single zone	Double duct	Rooftop	Equipment space	Above ceiling	Length	Width	Height	Weight (pounds)		OUTPUT[2] (MBh)	ENERGY SOURCE					(tons)	(cfm/unit)
												Gas	Electricity	Oil	Hot water	Steam		
	●		●			22'-0"	6'-10"	5'-7"	8800	1	70-1820	●	●	●	●	●	39-710 MBh	14000-21600
●			●			22'-0"	6'-10"	5'-7"	9000	Max. 12	110-1280	●	●	●	●	●	134-675 MBh	4500-19000
	●		●			8'-9"	4'-0"	3'-1"	1400	1	75- 262	●					39-122 MBh	1200- 4000
●			●			20'-0"	7'-8"	3'-8"	4800	Max. 14	68- 935	●	●		●	●	253-428 MBh	7200-12000
●			●			24'-7"	20'-5"	8'-9"	30000	Max. 27	700-4000	●	●	●	●	●	420-1500 MBh	14000-52000
	●		●			7'-5"	13'-0"	4'-0"	4000	1	103-1014	●	●		●	●	170-369 MBh	5600-12000
●		○	●			20'-0"	7'-10"	4'-1"	4870 5975	12	210-646	●	●		●	●	15-38	4800-14000
●			●			20'-0" 22'-8"	6'-9" 7'-8"	4'-3"	4500 6950	2-12	200-800	●	●		●	●	10-30	4000-10000
●			●	●		6'-5" 7'-2"	6'-0" 9'-7"	7'-1" 8'-5"	3000 6000	2-14	140-1362				●	●	20-50	8000-20000
●			●			17'-4"	7'-10"	4'-11"	3900 4350	2-12	400- 560	●					15-23	6000- 9000

largest unit unless otherwise specified. Where two
, upper figure is smallest and lower figure is

or all five energy sources, for specific source,
rer.

gures are rounded to nearest MBh or ton.

● Preferred

○ Alternate

Manufacturers of Heating, Ventilating and Cooling Subsystems (Continued).

8. Product: (1) ADAPT-AIRE
(2) ADAPTA-TEMP
(3) ADAPTA-ZONE
(4) MAMMOTH-AIRE
(5) SZ SERIES
Contact: Warren C. Wildes
Director of Marketing
(612) 544-2711
Manufacturer: Mammoth Division
Lear Siegler, Inc.
13120-B County Road 6
Minneapolis, Minnesota 55427

9. Product: ROOFPAK
Contact: A. W. Liefert
Product Management Department
(612) 545-2892
Manufacturer McQuay Division
McQuay-Perfex Inc.
13600 Industrial Park Boulevard
P.O. Box 1551
Minneapolis, Minnesota 55440

10. Product: Schemenauer MULTIZONE
Contact: A. N. Rogers
Product Manager
(419) 865-5521
Manufacturer: Modine Manufacturing Company
Holland, Ohio 43528

11. Product: CLIMATE CHANGER
Contact: Ron L. Weldon
Manufacturer: The Trane Company
3600 Pammell Creek Road
LaCrosse, Wisconsin 54650

12. Product: MULTIZONE
Sweet's Ref: 15.7/Yor
Contact: V. T. Kartorie
(717) 843-0731
Manufacturer: York Division
Borg-Warner Corporation
York, Pennsylvania 17405

LIGHTING/CEILING SUBSYSTEM PRODUCT DATA I

PRODUCT DESIGNATION		PLANNING MODULE: 60"x60"	30"x60"	20"x60"	Other	ASSEMBLY TYPES: Coffer	Luminous ceiling	Flat panel	40W TUBES PER PLANNING MODULE TO MAINTAIN: 70 footcandles	100 footcandles	150 footcandles	METHOD OF ATTACHMENT: Suspended runner	Suspended assembly	Direct attachment	Partitions on planning module only	AIR HANDLING: Boot and air-bar	Air handling fixture	Diffuser in module
Armstrong	C-60/30		●		○	●	●	●	1-2	1-2	2		●		●	◆	▲	▼
	C-60/60	●			○	●		●					●		●	◆	▲	▼
Butler	L/C 20	●	○	○		●		●	2	2	3			●		◆	◆	
	L/C 30	●				●		●	2	2.1	3.2			●		◆		
	GRID	●	●		●	●		●	2	2	3	●	●			◆	◆	
Ceiling Dynamics	LAMBDA V	●					●	●				●	●	●	●	◆		
	MOD II-V		●		○	●	●	●				●	●			◆		
	MOD V	●			○	●	●	●				●	●			◆		
	OMEGA V	●					●	●				●	●	●	●	◆		
Celotex	VARI-TEC 800		●		○	●	●	●				●	●	●		◆	▲	
Conwed	FIVE PLUS FIVE	●	○	○		●	●	●				●	●	●	●	◆	◆	◆
Donn	COORDINATOR	●			○	●		●					●			◆		
Keene	SPEC 10	●			○			●					●	●	●		◆	◆
	SPEC 30	●			○	●							●	●	●	◆	◆	◆
	SPEC 50	●			○	●							●	●	●		◆	◆
	SPEC 60		●		○	●		●					●	●	●	◆	▲	◆
	SPEC 70	●			○			●					●	●	●	◆	◆	◆
	SPEC 90	●			○	●		●					●	●	●		◆	◆

● Preferred

○ Alternate

◆ Supply and r

▼ Supply only

▲ Return only

NG SUBSYSTEM PRODUCT DATA I

PLANNING MODULE				ASSEMBLY TYPES			40W TUBES PER PLANNING MODULE TO MAINTAIN			METHOD OF ATTACHMENT				AIR HANDLING			FIRE RESISTANCE (Ceiling only)		SOUND ATTENUATION		SOUND ABSORBTION
60"x60"	30"x60"	20"x60"	Other	Coffer	Luminous ceiling	Flat panel	70 footcandles	100 footcandles	150 footcandles	Suspended runner	Suspended assembly	Direct attachment	Partitions on planning module only	Boot and air-bar	Air handling fixture	Diffuser in module	RATING	TEST ASTM E 119 or equiv.	RATING (STC)	TEST AMA-I-II or equiv.	(NRC)
○	●		○	●	●	●	1-2	1-2	2		●		●	◆	▲	▼	2 hour	⬢	41	⬢	0.65-0.75
●			○	●		●					●		●	◆	▲	▼	2 hour	⬢	40-44		0.65-0.75
●	○	○		●		●	2	2	3			●		◆	◆		1 hour	⬢	40-44		0.65-0.75
●				●		●	2	2.1	3.2			●		◆					40-44		0.45-0.55
●	●		●	●		●	2	2	3	●	●			◆	◆		2 hour	⬢	40-44		0.45-0.75
●					●	●				●	●	●	●	◆			2 hour	⬡	40-42		0.65-0.75
	●		○	●	●	●				●	●			◆			1 hour	⬡	40-44		0.65-0.85
●			○	●	●	●				●	●			◆			1 hour	⬡	40-44		0.65-0.85
●					●	●				●	●	●	●	◆					40-42		0.65-0.75
	●		○	●	●	●				●	●	●		◆	▲		Incomb		40 db.		0.65-0.75
●	○	○		●	●	●				●	●	●	●	◆	◆	◆	2 hour	⬢	35-39	⬢	0.55-0.75
●			○	●		●					●			◆			2 hour		37-40		0.65
●			○			●					●	●	●		◆	◆	Incomb		35		0.65-0.75
●			○	●							●	●	●	◆	◆	◆	Incomb		35		0.60-0.75
●			○	●							●	●	●		◆	◆	Incomb		35		0.60-0.75
	●		○	●		●					●	●	●	◆	▲	◆	Incomb		35		0.60-0.75
●			○			●					●	●	●	◆	◆	◆	Incomb		35		0.70-0.80
●			○	●		●					●	●	●		◆	◆	Incomb		35		0.65-0.75

● Preferred

○ Alternate

◆ Supply and return

▼ Supply only

▲ Return only

⬢ Tested by independent agency

⬡ Tested "in-house"

Manufacturers of Lighting/Ceiling Subsystems.

1. Product: (1) C-60/30
(2) C-60/60
Sweet's Ref: 9.1/Air
Contact: William W. Locke
Manager
Environmental Building Systems
Building Products Division
(717) 397-0611
Manufacturer: Armstrong Cork Company
Lancaster, Pa. 17604

2. Product: (1) L/C 20
(2) L/C 30
(3) GRID
Manufacturer: Butler Manufacturing Company
(see listing under structural subsystem)

3. Product: (1) LAMBDA V
(2) MOD II-V
(3) MOD V
(4) OMEGA V
Contact: Paul D. Dail
Vice President
Sales and Marketing
(213) 579-2652
Manufacturer: Ceiling Dynamics, Inc.
1845 Belcroft
South El Monte, Calif. 91733

4. Product: VARI-TEC 800
Sweet's Ref: 9.1/Ce
Contact: Karl W. Holm
Field Product Manager—
Acoustical
Manufacturer: The Celotex Corporation
1500 North Dale Mabry
Tampa, Florida 33607

5. Product: FIVE PLUS FIVE
Sweet's Ref: 9.1/Co
Contact: L. C. Sudheimer
Manager, Specialty Products
(612) 633-8660
Manufacturer: Conwed Corporation
332 Minnesota Street
St. Paul, Minnesota 55101

6. Product: COORDINATOR
Contact: Peter G. Reynard
Partition Sales Manager
(216) 871-1000
Manufacturer: Donn Products, Inc.
700 Bassett Road
Westlake, Ohio 44091

g Subsystems.

4. Product: VARI-TEC 800
   Sweet's Ref: 9.1/Ce
   Contact: Karl W. Holm
   Field Product Manager—
   Acoustical
   Manufacturer: The Celotex Corporation
   1500 North Dale Mabry
   Tampa, Florida 33607

5. Product: FIVE PLUS FIVE
   Sweet's Ref: 9.1/Co
   Contact: L. C. Sudheimer
   Manager, Specialty Products
   (612) 633-8660
   Manufacturer: Conwed Corporation
   332 Minnesota Street
   St. Paul, Minnesota 55101

6. Product: COORDINATOR
   Contact: Peter G. Reynard
   Partition Sales Manager
   (216) 871-1000
   Manufacturer: Donn Products, Inc.
   700 Bassett Road
   Westlake, Ohio 44091

7. Product: (1) SPEC 10
   (2) SPEC 30
   (3) SPEC 50
   (4) SPEC 60
   (5) SPEC 70
   (6) SPEC 90
   Contact: Thomas R. Shine
   Vice President
   (609) 921-8171
   Manufacturer: Keene Corporation
   Interior Systems Division
   Route 206 Center
   Princeton, New Jersey 08540

LIGHTING/CEILING SUBSYSTEM PRODUCT DATA II

PRODUCT DESIGNATION	PLANNING MODULE				ASSEMBLY TYPES			40W TUBES PER PLANNING MODULE TO MAINTAIN			METHOD OF ATTACHMENT				AIR HANDLING			
	60"x60"	30"x60"	20"x60"	Other	Coffer	Luminous ceiling	Flat panel	70 footcandles	100 footcandles	150 footcandles	Suspended runner	Suspended assembly	Direct attachment	Partitions on planning module only	Boot and air bar	Air handling fixture	Diffuser in module	
Lok Products VCR	●			○	●						●	●			◆	◆		
CUSTOM	●			○	●						●	●			◆	◆		
Luminous Ceilings TEC III	●			○			●				●			●	◆	▲		I
TEC IV	●			○			●				●			●	▼	▲		I
TEC VI	●				●	●	●				●	●	●	●	▼	▲		1
TEC XIV	●			○	●						●			●	▼	▲		I
National Ceiling 1000	●	○		○	●		●	1.3	1.9	2.8	●			●	◆	▲	◆	2
2000	●	○		○	●			1.3	1.9	2.8	●			●	◆	▲	◆	I
3000	○	●			●	●		1.3	1.9	2.8	●			●	◆	▲	◆	2
Owens-Corning DIMENSIONAIRE	○			●	●		●	2	2	4	●	●		●	◆			2
Soundlock SOUNDLUME	●			○	●		●	2	2	4	●	●			◆	◆	◆	I
Sunbeam IS1000	●			○			●				●				◆			I
IS5000	●			○	●		●				●				◆			I
IS6000	●			○		●	●				●				◆			
Syncon SYNCON	●	●			●		●	2	2	3	●		●		◆	▲	◆	I
Daybrite COMPAC	●			○	●		○	2	3	4		●		●	◆	▲	◆	2

● Preferred

○ Alternate

◆ Supply and ret

▼ Supply only

▲ Return only

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SUBSYSTEM PRODUCT DATA II

PLANNING MODULE			ASSEMBLY TYPES			40W TUBES PER PLANNING MODULE TO MAINTAIN			METHOD OF ATTACHMENT				AIR HANDLING			FIRE RESISTANCE (Ceiling only)		SOUND ATTENUATION		SOUND ABSORBTION
30"x60"	20"x60"	Other	Coffer	Luminous ceiling	Flat panel	70 footcandles	100 footcandles	150 footcandles	Suspended runner	Suspended assembly	Direct attachment	Partitions on planning module only	Boot and air bar	Air handling fixture	Diffuser in module	RATING	TEST ASTM E119 or equiv.	RATING (STC)	TEST AMA-I-II or equiv.	(NRC)
		●	●						●	●			◆	◆						
		○	●						●	●			◆	◆						
		○			●				●			●	◆	▲		Incomb				
		○			●				●			●	▼	▲		Incomb		42 db.		0.75-0.85
			●	●	●				●	●	●	●	▼	▲		1 hour	⬢	40-42 db		0.65-0.70
		○	●						●			●	▼	▲		Incomb		42 db.		0.75-0.85
○		○	●		●	1.3	1.9	2.8	●			●	◆	▲	◆	2 hour		40		0.65-0.75
○		○	●			1.3	1.9	2.8	●			●	◆	▲	◆	Incomb		35		0.65-0.75
●			●	●		1.3	1.9	2.8	●			●	◆	▲	◆	2 hour	⬡	40		0.65-0.75
		●	●		●	2	2	4	●	●		●	◆			2 hour	◖	30-34 40-44	⬡	0.85-0.95 0.65-0.70
		○	●		●	2	2	4	●	●			◆	◆	◆	Incomb		40	⬢	0.65-0.75
		○			●				●				◆			Incomb		40-44		0.65-0.75
		○	●		●				●				◆			Incomb		40-44		0.65-0.75
		○		●	●				●				◆							
●			●		●	2	2	3	●		●		◆	▲	◆	Incomb		35		
		○	●		○	2	3	4		●		●	◆	▲	◆	2 hour	⬢	45	⬢	0.60-0.70

● Preferred

○ Alternate

◆ Supply and return

▼ Supply only

▲ Return only

⬢ Tested by independent agency

⬡ Tested "in-house"

Manufacturers of Lighting/Ceiling Subsystems (Continued).

8. Product: (1) VCR
(2) CUSTOM
Contact: Arnold D. Metcalf
Vice President—National Sales
(714) 871-9500
Manufacturer: Lok Products Co.
801 South Acacia Avenue
Fullerton, California 92634

9. Product: (1) TEC III
(2) TEC IV
(3) TEC VI
(4) TEC XIV
Sweet's Ref: 9.1/Lu
Contact: James E. Leonard
Manager, Environmental Ceiling Systems
(312) 935-8900
Manufacturer: Luminous Ceilings, Inc.
3701 North Ravenswood Ave.
Chicago, Illinois 60613

10. Product (1) 1000
(2) 2000
(3) 3000
Sweet's Ref: 9.1/N
Contact: Neil J. Thompson
President
(312) 282-3030
Manufacturer: National Ceiling Corporation
5312 North Elston Avenue
Chicago, Illinois 60630

11. Product: DIMENSIONAIRE
Sweet's Ref: 9.1/Ow
Contact: Edmund B. Hourigan, Jr.
Product Manager
Commercial Ceilings Division
(419) 259-3000
Manufacturer: Owens-Corning Fiberglas Corp.
Fiberglas Tower
Toledo, Ohio 43601

12. Product: SOUNDLUME
Contact: Richard G. Barnett
Vice President-Sales
(404) 633-9464
Manufacturer: The Soundlock Corporation
2004 Breckenridge Drive, N.E.
Atlanta, Georgia 30345

13.

14.

15.

Subsystems (Continued).

10. Product: (1) 1000
(2) 2000
(3) 3000
Sweet's Ref: 9.1/N
Contact: Neil J. Thompson
President
(312) 282-3030
Manufacturer: National Ceiling Corporation
5312 North Elston Avenue
Chicago, Illinois 60630

11. Product: DIMENSIONAIRE
Sweet's Ref: 9.1/Ow
Contact: Edmund B. Hourigan, Jr.
Product Manager
Commercial Ceilings Division
(419) 259-3000
Manufacturer: Owens-Corning Fiberglas Corp.
Fiberglas Tower
Toledo, Ohio 43601

12. Product: SOUNDLUME
Contact: Richard G. Barnett
Vice President—Sales
(404) 633-9464
Manufacturer: The Soundlock Corporation
2004 Breckenridge Drive, N.E.
Atlanta, Georgia 30345

13. Product: (1) IS1000
(2) IS5000
(3) IS6000
Contact: Max Corazza
Manager, Interior Systems
Division
(213) 748-6595
Manufacturer: Interior Systems Division
Sunbeam Lighting Company, Inc.
777 East 14th Place
Los Angeles, California 90021

14. Product: SYNCON
Manufacturer: Syncon
(see listing under structural
subsystem)

15. Product: (1) FLAT COMPAC
(2) PYRAMIDAL COMPAC
Contact: George Gilleard
Manager, Application
Engineering
(314) 381-3700
Manufacturer: Day-Brite Lighting Division
Emerson Electric Co.
5411 Bulwer Avenue
P. O. Box 141, 63166
St. Louis, Missouri 63147

TABLE OF MANDATORY INTERFACES

Matrix II
Subsystem Compatibility
Lighting/Ceiling
Partitions

LIGHTING-CEILING	PARTITIONS
Armstrong C-60/30	Adanlock THINWALL
Armstrong C-60/60	Advanced TYPE 12
Butler L/C20,30,GRID	Advanced TYPE 18
Clg.Dyn. LAMBDA, OMEGA V	Donn CRUSADER
Clg.Dyn. MOD II-V, MOD V	Donn UNITIZED
Celotex VARI-TEC 800	Donn VANGUARD
Conwed FIVE PLUS FIVE	Flangeklamp DIMENSIONWALL
Donn COORDINATOR	Hauserman DOUBLE WALL
Keene SPEC 10-SPEC 90	Hauserman READY WALL
Lok VCR, CUSTOM	Hough 8100
Lum. Clg. TEC VI	Hupp MAGNAWALL 400,600,800
Nat. Clg. 1000-3000	Kaiser KW-500
O-C DIMENSIONAIRE	Keene KWIK-ZIP
Soundlock SOUNDLUME	Keene PENCILINE, PENWALL
Sunbeam IS1000-6000	Kwik-Wall REGULAR
Syncon	Masonite SYSTEM 175, 275
	Mills CLASSROOM
	Modernfold DIVISIFLEX 300
	Modernfold SPACEFLEX
	National Gypsum CONTEMPOWALL
	Neal Slate SYSTEM 2

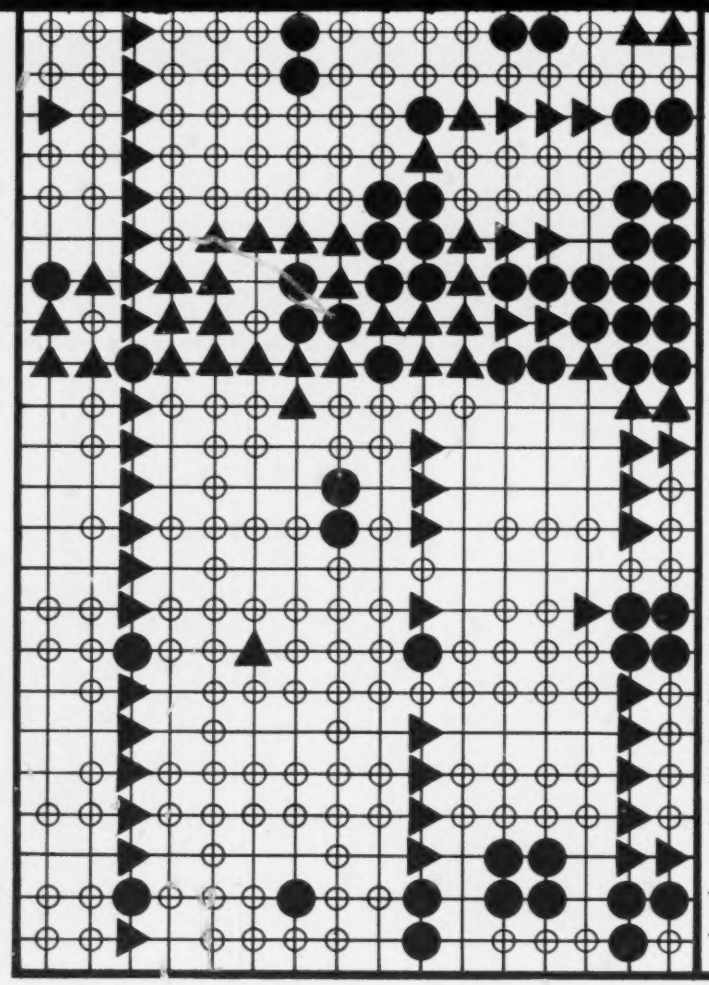
indicates full compatibility claimed by manufacturers of both products. For requirements of full compatibility, see pages 1-2.

indicates full compatibility claimed by manufacturer of product listed at side of chart but not by manufacturer of product listed at top of chart.

indicates full compatibility claimed by manufacturer of product listed at top of chart but not by manufacturer of product listed at side of chart.

indicates (a) full compatibility claimed by manufacturer or both manufacturers of both products, but not by report and not by manufacturer of product listed at top or side of chart.

PARTITIONS



Advanced TYPE 12
Advanced TYPE 18
Donn CRUSADER
Donn UNITIZED
Donn VANGUARD
Flangeklamp DIMENSIONWALL
Hauserman DOUBLE WALL
Hauserman READY WALL
Hough 8100
Hupp MAGNAWALL 400,600,800
Kaiser KW-500
Keene KWIK-ZIP
Keene PENCILINE, PENWALL
Kwik-Wall REGULAR
Masonite SYSTEM 175, 275
Mills CLASSROOM
Modernfold DIVISIFLEX 300
Modernfold SPACEFLEX
National Gypsum CONTEMPOWALL
Neal Slate SYSTEM 2
U. S. Gypsum ULTRAWALL
Vaughan Walls
VMP CORPORATE, TEACHING WALL

y claimed by manufacturers
irements of full compati-

y claimed by manufacturer
chart but not by manu-
t top of chart.

y claimed by manufacturer
chart but not by manu-
at side of chart.

indicates (a) probable compatibility claimed by one or both manufacturers, and/or (b) probable or full compatibility claimed in previous edition of this report and not revised by manufacturer(s).

indicates compatibility not known or data missing.

indicates products incompatible.

PARTITION SUBSYSTEM PRODUCT DATA I

PRODUCT DESIGNATION	GENERIC TYPE[1]				PANEL DIMENSIONS (STOCK)			ATTACHMENT							AVAILABLE FINISHES[2]	LATERAL LOAD
								CEILING				FLOOR				
	Demountable steel	Demountable other	Portable steel	Portable other	Thickness	Width	Maximum height	Uplift	Track	Clip	Attached channel	Friction	Gripper	Attached channel		(psf)
Adanlock THINWALL					1.75"	24" 30" 48"	10'								be,hv	
Advanced TYPE 12				●	3.00"	60" Max.	12'	●				●			All listed	10
TYPE 18		●			2.25"	60" Max.	12'				●	●			All listed	5
Donn CRUSADER	●	●			3.00" 6.00"	30"	14'			●	●			●	be,c,v,mt	15
UNITIZED			●		3.00"	48" 60"	10'		●			●			be,c,v,mt	5
VANGUARD		●			3.00" 3.25" 6.00"	48" Max.				●				●	v,ci,c, t,ti	
Flangeklamp DIMENSION-WALL	●				3.00" 4.00" 5.00" 6.00"	30"	10'				●			●	v,be,c,mt	5.2
Hauserman DOUBLE WALL	●				3.00" 6.50"	40"	12'				●			●	v,c,mt,t	10
READY WALL			●		2.31"	48"	12'			●	●	●	●		c,be,mt,t	10
Hough 8100				●	2.88"	48" 60"	12'	●				●			v,vt,h,hv, c,t,mt	7.5
Richards-Wilcox[3] AIRWALL 300				●	1.63"	36" 47.5"	12'	◆				●			hv,h,v, ci,	5
AIRWALL 500				●	2.13"	48"	12'	◆				●				5
AIRWALL 700				●				◆				●				5
MAGNAWALL 400				●	1.63"	36" 47.5"	12'	◇				●			hv,h,v,ci	5
MAGNAWALL 600				●	2.13"	48"	12'	◇				●			hv,h,v, ci,t	5
MAGNAWALL 800				●				◇				●				5
Kaiser KW-500		●			3.75"	24" 30" 48"	9'		●					●	v,c,t	5

Notes on page 19

◆ Pneumatic uplift ◇ Magnet/uplift ⬢ Tested by indep

TEM PRODUCT DATA I

RIC [1]		PANEL DIMENSIONS (STOCK)			ATTACHMENT								AVAILABLE FINISHES [2]	LATERAL LOAD	FIRE RESISTANCE		SOUND ATTENUATION		RELOCATION	
					CEILING				FLOOR						RATING	TEST	RATING	TEST	RATE	MOVE
Portable steel	Portable other	Thickness	Width	Maximum height	Uplift	Track	Clip	Attached channel	Friction	Gripper	Attached channel			(psf)		ASTM E119 or equivalent	(STC)	ASTM E90 or equivalent	(lineal feet per manhour)	By manufacturer / By school personnel
		1.75"	24" 30" 48"	10'									be,hv							●
	●	3.00"	60" Max.	12'	●					●			All listed	10	Incomb				70-80	●
		2.25"	60" Max.	12'				●		●			All listed	5	Incomb				30-40	●
		3.00" 6.00"	30"	14'				●	●			●	be,c,v,mt	15	1 hour 2 hour	⬢	40,46	⬢	2.1	● ●
●		3.00"	48" 60"	10'		●				●			be,c,v,mt	5	Incomb		40	⬢	30-40	●
		3.00" 3.25" 6.00"	48" Max.					●				●	v,ci,c, t,ti		1 hour	⬢	35-41	⬢	5	● ●
		3.00" 4.00" 5.00" 6.00"	30"	10'				●				●	v,be,c,mt	5.2	1 hour	⬢	45	⬢	2.5	● ●
		3.00" 6.50"	40"	12'				●				●	v,c,mt,t	10	1 hour	⬢	35,40 43,45	⬢	2.0	● ●
●		2.31"	48"	12'				●	●	●	●		c,be,mt,t	10	Incomb		39	⬢	30-40	●
	●	2.88"	48" 60"	12'	●					●			v,vt,h,hv, c,t,mt	7.5					50-60	●
	●	1.63"	36" 47.5"	12'	◆					●			hv,h,v, ci,	5			28		90-100	●
	●	2.13"	48"	12'	◆					●				5			38		90-100	●
	●				◆					●				5			42		90-100	●
	●	1.63"	36" 47.5"	12'	◇					●			hv,h,v,ci	5			28-33		50-70	●
	●	2.13"	48"	12'	◇					●			hv,h,v, ci,t	5			38		50-70	●
	●				◇					●				5			42		50-70	●
		3.75"	24" 30" 48"	9'		●					●		v,c,t	5	1 hour	⬢	36-53	⬡	4.0	●

◇ Pneumatic uplift ◇ Magnet/uplift ⬢ Tested by independent agency ⬡ Tested "in-house"

Manufacturers of Demountable and Portable Partitions Subsystems.

1. Product: THINWALL
   Contact: Walter B. Erb
   (716) 483-1551
   Manufacturer: Adanlock Jamestown Corp.
   61 Water Street
   Jamestown, New York 14701

2. Product: (1) TYPE 12
   (2) TYPE 18
   Sweet's Ref: 10.1/Ad
   Contact: Larry Kelley
   (714) 635-5350
   Manufacturer: Advanced Equipment Corp.
   241 Crescent Way
   Anaheim, California 92801

3. Product: (1) CRUSADER
   (2) UNITIZED
   (3) VANGUARD
   Sweet's Ref: 10.1/Do
   Contact: Pete Reynard
   (216) 871-1000
   Manufacturer: Donn Products, Inc.
   700 Bassett Road
   Westlake, Ohio 44091

4. Product: DIMENSION-WALL
   Sweet's Ref: 10.1/Fl
   Contact: J. R. Moberly
   Sales Manager
   (716) 825-6650
   Jack Hirzel
   Flangeklamp of California
   1433 Kern Street
   Stockton, California
   Manufacturer: Flangeklamp Corporation
   1971 Abbott Road
   Buffalo, New York 14218

NOTES FOR PARTITION SUBSYSTEM PRODUCT DATA CHARTS, PAGES 18 AND 20.

1. Full descriptions of generic types are:

   "Demountable steel"—steel clad gypsum partitions requiring mechanical attachment to other subsystems. The majority of these products have independently demountable panel face units.
   "Demountable other"—same as above but with panel face units of materials other than steel clad gypsum.
   "Portable steel"—steel clad panel partitions requiring no mechanical attachment to other subsystems and designed for quick and easy relocation by school personnel.
   "Portable other"—same as above but with panel materials other than steel.

2. Abbreviations used to indicate surfaces are:

   v = vinyl
   be = baked enamel
   h = hardwood
   hv = hardwood veneer
   c = chalk finish
   ci = chalkboard insert
   ms = masonite
   t = tackboard
   ti = tackboard insert
   mt = magnetic tackboard

3. See note in listing of manufacturers.

and Portable Partitions Subsystems.

Corp.

k 14701

Corp.

92801

Sweet's Ref: 10.1/Do

Contact: Pete Reynard
(216) 871-1000

Manufacturer: Donn Products, Inc.
700 Bassett Road
Westlake, Ohio 44091

4. Product: DIMENSION-WALL
Sweet's Ref: 10.1/Fl

Contact: J. R. Moberly
Sales Manager
(716) 825-6650

Jack Hirzel
Flangeklamp of California
1433 Kern Street
Stockton, California

Manufacturer: Flangeklamp Corporation
1971 Abbott Road
Buffalo, New York 14218

ON SUBSYSTEM PRODUCT DATA CHARTS, PAGES 18 AND 20.

ric types are:

teel clad gypsum partitions requiring mechanical at-
stems. The majority of these products have indepen-
el face units.

same as above but with panel face units of materials
sum.

lad panel partitions requiring no mechanical attach-
s and designed for quick and easy relocation by school

as above but with panel materials other than steel.

dicate surfaces are:

v = hardwood veneer
= chalk finish
i = chalkboard insert
ns = masonite
t = tackboard
ti = tackboard insert
mt = magnetic tackboard

nufacturers.

5. Product: (1) DOUBLE WALL
(2) READY WALL
Sweet's Ref: 10.1/Hau

Contact: Warren H. Peterson
Product Manager
(216) 883-1400

Manufacturer: The E. F. Hauserman Company
5711 Grant Avenue
Cleveland, Ohio 44105

6. Product: SERIES 8100
Sweet's Ref: 10.1/Huf

Contact: Allen R. Wilkins
(608) 756-1241

Manufacturer: Hough Manufacturing Corp.
1023-1050 South Jackson Street
Janesville, Wisconsin 53545

Note. Product designed with 3" total travel on upper connecting trim with 5#/1f uplift throughout to allow for seismic conditions, changing live loads, settlement, etc.

7. Product: (1) AIRWALL 300, 500, 700
(2) MAGNAWALL 400
(3) MAGNAWALL 600-800

Contact: Arthur G. Imbrecht
President
(213) 636-1001

Manufacturer: Airwall Division
Richards-Wilcox Manufacturing Company
8140 East Rosecrans Avenue
Paramount, California 90723

Note: Manufacturer has available a special cart to assist in relocating these products. High relocation rates are attainable only when using this cart.

8. Product: KW-500
Sweet's Ref: 10.1/Ka

Contact: William J. Marshall
Director of Technical Services
(415) 271-2211

Manufacturer: Kaiser Gypsum Company, Inc.
Kaiser Center
300 Lakeside Drive
Oakland, California 94604

PARTITION SUBSYSTEM PRODUCT DATA II

PRODUCT DESIGNATION	GENERIC TYPE[1]				PANEL DIMENSIONS (STOCK)			ATTACHMENT						AVAILABLE FINISHES[2]	LATERAL LOAD	FIRE RESISTANC	
								CEILING				FLOOR				RATING	TE
	Demountable steel	Demountable other	Portable steel	Portable other	Thickness	Width	Maximum height	Uplift	Track	Clip	Attached channel	Friction	Gripper	Attached chanel		(psf)		ASTM E119 or
Kwik-Wall REGULAR				●	1.75" 2.25"	48"						●			v,h,hv, plywood			
Masonite SYSTEM 175		●			1.60"	48" 60"	10'			◆	◆			●	v,h,be,c, t,mt,ms		Incomb	
SYSTEM 275		●			2.75"	48" 60"	10'			◆	◆			●	v,h,be,c, t,mt,ms		Incomb	
Mills CLASSROOM	●		●		2.25"	60" Max.	12'			◆			●		be,c,mt		1 hour	
Modernfold DIVISIFLEX 300				●	2.25"	48"	12'	◆				●			v,vt,h,hv c,mt,be			
SPACEFLEX	●				3.00"	30"	14'				◆			●	v,be,c,mt, ti	15	1 hour	
National Gypsum CONTEMPOWALL		●			2.63" 3.50" 3.75"	30" 48"	12'				◆			●	v	5-6	1 hour	⬢
Neal Slate SYSTEM 2	●	●			3.00"	48" Max.	14'			◆	◆			●	All listed and others		Incomb	
Keene (Penn Metal) KWIK-ZIP		●			3.50" 3.75"	48"	12'				◆			●			1 hour	⬢
PENCILINE	●				3.00"	24" 30"	10'				◆			●	be,v	5	1 hour	⬢
PENWALL	●	●			3.00" 3.50" 3.75"	24" 48¼"	10'				◆			●	be,v	5	1 hour	⬢
U. S. Gypsum ULTRAWALL		●			3.38"	24" 30"	12'				◆			●	plain,v		1 hour	⬢
VAUGHAN WALLS		●			2.25" 3.00" 5.25" 6.75"	24" 30"	14'				◆			●	hv,v,c, gyp. bd.		1 hour 2 hour	⬢
VMP TEACHING WALL	●				2.25"	60" Max.	12'		◆	◆	◆	◇	◇	◇	be,v,c,mt	10	1 hour	⬢
CORPORATE MS-450	●				2.25"	60" Max.	12'		◆	◆	◆	◇	◇	◇	be,hv,v,c, mt		1 hour	⬢

Notes on page 19. ◆ Pneumatic uplift ◇ Magnet/uplift ⬢ Tested by independent age

EM PRODUCT DATA II

Portable other	PANEL DIMENSIONS (STOCK)			ATTACHMENT						AVAILABLE FINISHES[2]	LATERAL LOAD	FIRE RESISTANCE		SOUND ATTENUATION		RELOCATION	
				CEILING			FLOOR					RATING	TEST	RATING	TEST	RATE	MOVE
	Thickness	Width	Maximum height	Uplift	Track	Clip	Friction	Gripper	Attached channel		(psf)		ASTM E119 or equivalent	(STC)	ASTM E90 or equivalent	(lineal feet per man hour)	By manufacturer By school personnel
●	1.75" 2.25"	48"					●			v,h,hv, plywood							
	1.60"	48" 60"	10'			●			●	v,h,be,c, t,mt,ms		Incomb		40	●	3	● ●
	2.75"	48" 60"	10'			●			●	v,h,be,c, t,mt,ms		Incomb		40	●	2-3	● ●
	2.25"	60" Max.	12'			●		●		be,c,mt		1 hour		42	●	2-2.5	● ●
●	2.25"	48"	12'	●			●			v,vt,h,hv c,mt,be				30		50-60	
	3.00"	30"	14'			●			●	v,be,c,mt, ti	15	1 hour		37	●	2	● ●
	2.63" 3.50" 3.75"	30" 48"	12'			●			●	v	5-6	1 hour	⬢	34-49	●	1.5-2.0	● ●
	3.00"	48" Max.	14'			●			●	All listed and others		Incomb		39-45	●	3.25 2.00	● ●
	3.50" 3.75"	48"	12'			●			●			1 hour	⬢	38,46	⬡		
	3.00"	24" 30"	10'			●			●	be,v	5	1 hour	⬢	43,50	●	1.0	
	3.00" 3.50" 3.75"	24" 48¼"	10'			●			●	be,v	5	1 hour	⬢	38,41	●		
	3.38"	24" 30"	12'			●			●	plain,v		1 hour	⬢	36,44 50	●	4.0	
	2.25" 3.00" 5.25" 6.75"	24" 30"	14'			●			●	hw,v,c, gyp. bd.		1 hour 2 hour	⬢	36 45 52 61	●	4.0 3.0 2.0 1.0	● ●
	2.25"	60" Max.	12'		●	●		●	●	be,v,c,mt	10	1 hour	⬢	41	●	4.0	● ●
	2.25"	60" Max.	12'		●	●		●	●	be,hv,v,c, mt		1 hour	⬢	42	●	2.0	● ●

Pneumatic uplift ◇ Magnet/uplift ⬢ Tested by independent agency ⬡ Tested "in-house"

Manufacturers of Demountable and Portable Partitions Subsystems (Continued).

9. Product: REGULAR
   Contact: (217) 522-5552
   Kwik-Wall Division
   Manufacturer: Capitol Wood Works
   P.O. Box 3267
   Springfield, Illinois 62708

10. Product: (1) SYSTEM 175
    (2) SYSTEM 275
    Sweet's Ref: 10.1/Ma
    Contact: R. S. Campbell
    Partition Systems
    (312) 372-5642
    Manufacturer: Masonite Corporation
    29 North Wacker Drive
    Chicago, Illinois 60606

11. Product: CLASSROOM
    Sweet's Ref: 10.1/Mil
    Contact: Gordon J. Pollock
    Director, Research & Development
    (216) 531-1100
    Manufacturer: The Mills Company, Inc.
    965 Wayside Road
    Cleveland, Ohio 44110

12. Product: (1) DIVISIFLEX 300
    Contact: J. W. Rae
    (317) 529-1450
    Product: (2) SPACEFLEX
    Contact: J. Lovegren
    Manager, Architectural Systems
    (317) 529-1450
    Sweet's Ref: 10.2/Mo
    Manufacturer: Modernfold
    P.O. Box 310
    New Castle, Indiana 47362

13. Product: GOLDBOND CONTEMPO-WALL
    Sweet's Ref: 10.1/Nat
    Contact: John H. Bacon
    Supervisor, Technical Communications
    (716) 852-5880
    Manufacturer: National Gypsum Company
    325 Delaware Avenue
    Buffalo, New York 14202

14. Product: SYSTEM 2
    Contact: John L. Lord
    Vice-President
    (612) 941-2440
    Manufacturer: W. E. Neal Slate Co.
    7975 Wallace Road
    Eden Prairie, Minnesota 55343

15. Product: (1) KWIK-ZIP
    (2) PENCILINE
    (3) PENWALL
    Sweet's Ref: 10.1/Ke
    Contact: Thomas R. Shine
    Vice-President
    (609) 921-8171
    Manufacturer: Keene Corporation
    Interior Systems Division
    Route 206 Center
    Princeton, New Jersey 08540

le and Portable Partitions Subsystems (Continued).

13. Product: GOLDBOND CONTEMPO-WALL
Sweet's Ref: 10.1/Nat
Contact: John H. Bacon
Supervisor, Technical Communications
(716) 852-5880
Manufacturer: National Gypsum Company
325 Delaware Avenue
Buffalo, New York 14202

14. Product: SYSTEM 2
Contact: John L. Lord
Vice-President
(612) 941-2440
Manufacturer: W. E. Neal Slate Co.
7975 Wallace Road
Eden Prairie, Minnesota 55343

15. Product: (1) KWIK-ZIP
(2) PENCILINE
(3) PENWALL
Sweet's Ref: 10.1/Ke
Contact: Thomas R. Shine
Vice-President
(609) 921-8171
Manufacturer: Keene Corporation
Interior Systems Division
Route 206 Center
Princeton, New Jersey 08540

16. Product: ULTRAWALL
Sweet's Ref: 10.1/Uni
Contact: R. L. Selbe
Project Manager
Component Systems
Manufacturer: United States Gypsum Company
101 South Wacker Drive
Chicago, Illinois 60606

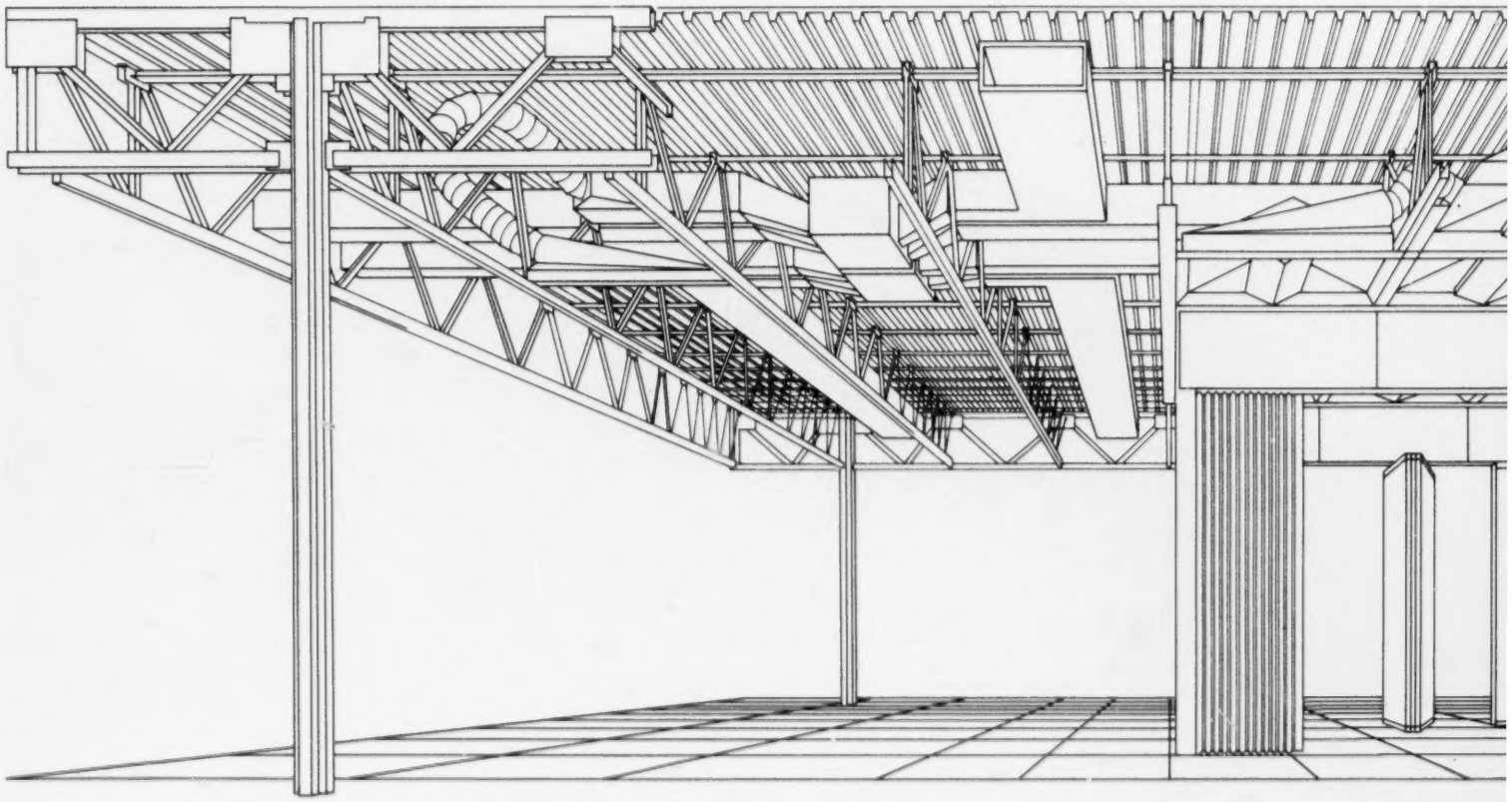
17. Product: VAUGHAN WALLS
Sweet's Ref: 10.1/Vau
10.1/Uni
Contact: Lloyd Henry
Vice President
(213) 879-0840
Manufacturer: Vaughan Interior Walls, Inc.
11681 San Vicente Blvd.
Los Angeles, California 90049

18. Product: (1) TEACHING WALL
(2) CORPORATE MS-450
Sweet's Ref: 10.1/Vi
Contact: Charles Hodapp
(703) 672-2800
Manufacturer: Virginia Metal Products
Division of GRAY Manufacturing Company
Orange, Virginia 22960

MATRIX III
COMPATIBLE
BUILDING SYSTEMS

	STRUCTURE				LIGHTING-CEILING	HVC
	Butler SPACE GRID	Haven-Busch JOISTRUSS	Macomber V-LOK	Romac MODULOC		
Armstrong C-60/30						
Armstrong C-60/60						
Butler L/C20,30,GRID						
Clg. Dyn. LAMBDA, OMEGA V						
Clg. Dyn. MOD II-V, MOD V						
Donn COORDINATOR						
Keene SPEC 10-SPEC 90						
Syncon						
AAF MZRM						
Carrier 48MA						
ITT RMA 100,400,600						
Lennox DMS-1, DMS-3						
Lennox DMS-2						
Advanced TYPE 12						
Donn CRUSADER						
Donn VANGUARD						

| | | |

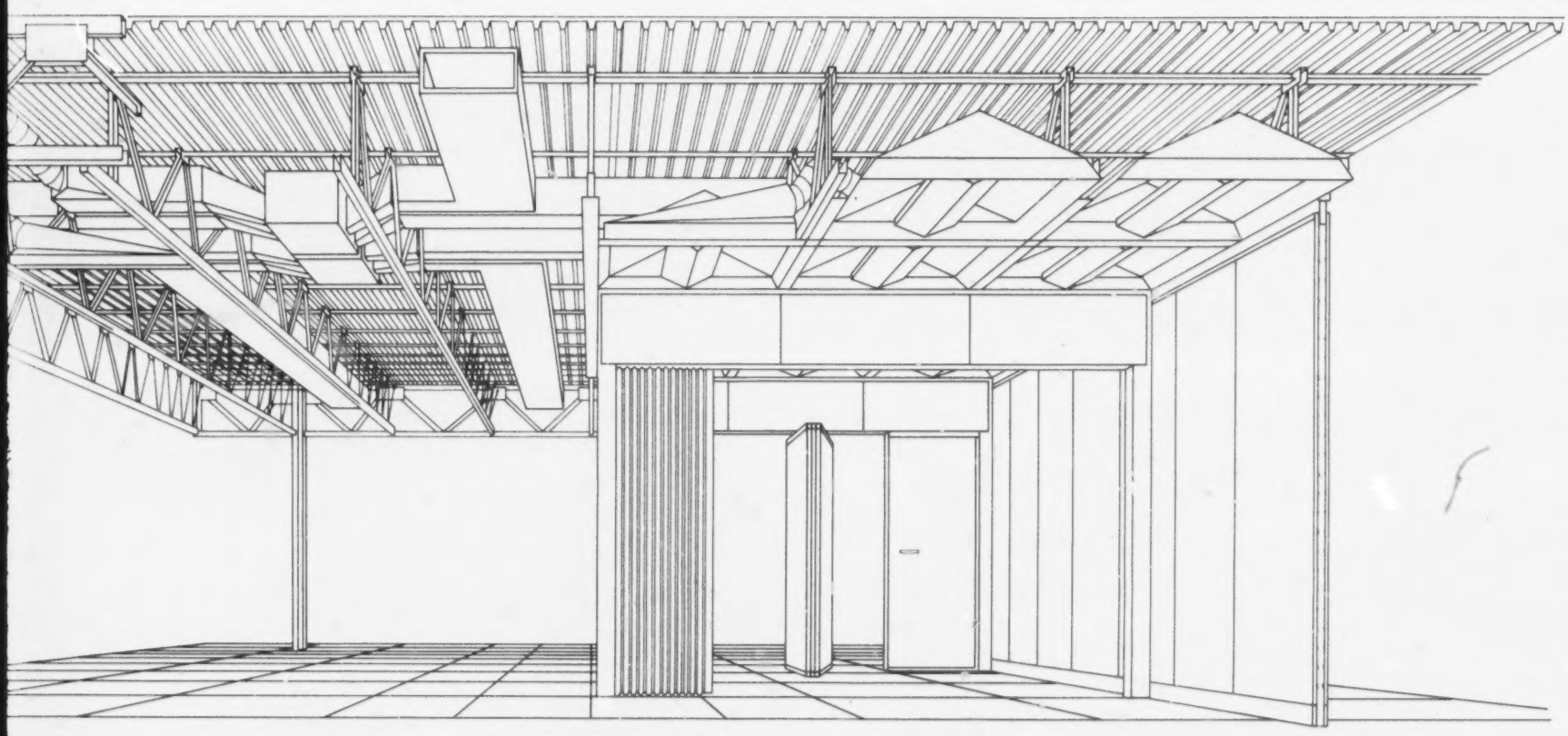


FIRMS PROVIDING PARTIAL BUILDING SYSTEMS

1. System: American Modular System Designs
   Contact: Mr. Nils J. Jonsson
   (617) 547-5100
   Address: American Modular Systems Designs, Inc.
   179 Fifth Street
   Cambridge, Massachusetts 02141

2. System: Educational Building Systems
   Contact: R. D. MacDonald
   President
   (416) 368-2841
   Address: Educational Building Systems, Ltd.
   159 Bay Street
   Suite 1006
   Toronto 116, Ontario, CANADA

3. System: MKM
   Contact: Mr. Ted Knapp
   (216) 247-6362
   Address: MKM Corporation
   Manufacturers of Environmental Systen
   10 North Main Street
   Chagrin Falls, Ohio 44022



PARTIAL BUILDING SYSTEMS

ystem Designs

ystems Designs, Inc.

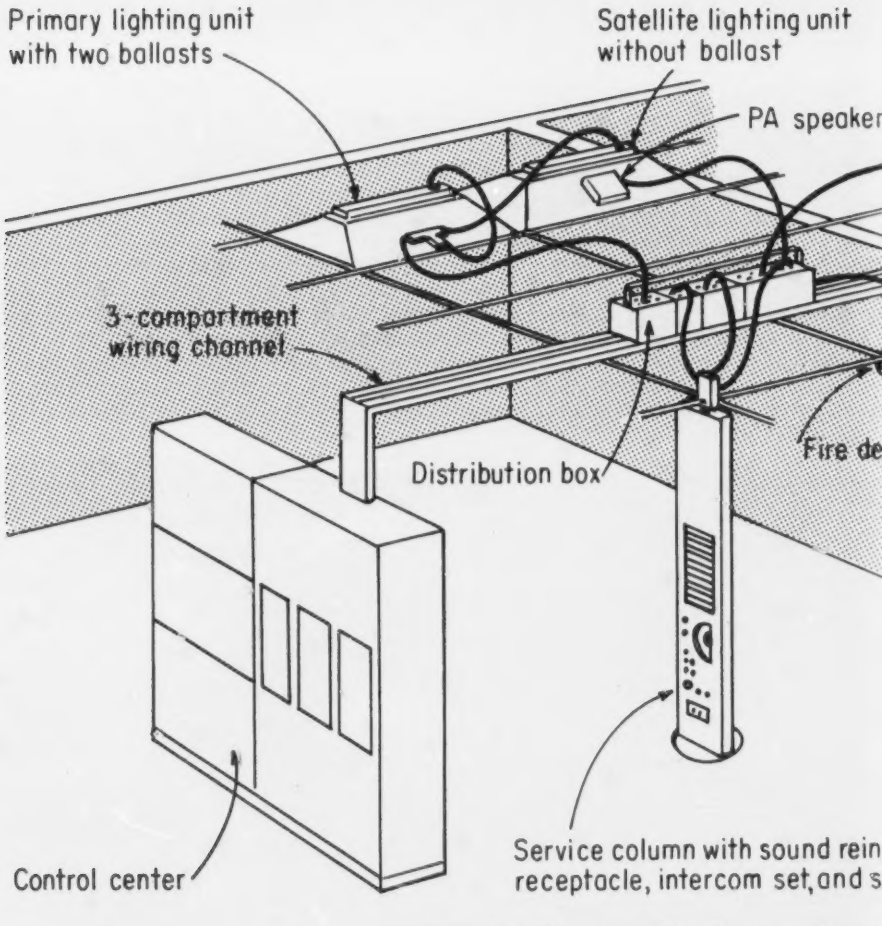
usetts 02141

2. System: Educational Building Systems
   Contact: R. D. MacDonald
   President
   (416) 368-2841
   Address: Educational Building Systems, Ltd.
   159 Bay Street
   Suite 1006
   Toronto 116, Ontario, CANADA

3. System: MKM
   Contact: Mr. Ted Knapp
   (216) 247-6362
   Address: MKM Corporation
   Manufacturers of Environmental Systems
   10 North Main Street
   Chagrin Falls, Ohio 44022

4. System: School Renovation System (SRS)
   Contact: Mike Berline
   (415) 398-7146
   Address: 60 Union Street
   San Francisco, California 94111

5. System: SYNCON
   Contact: Joseph C. White
   Douglas C. Ryhn
   (414) 671-1180
   Address: Syncon, Inc.
   1717 South 12th Street
   Milwaukee, Wisconsin 53204



Electric/Electronic Distribution Syste

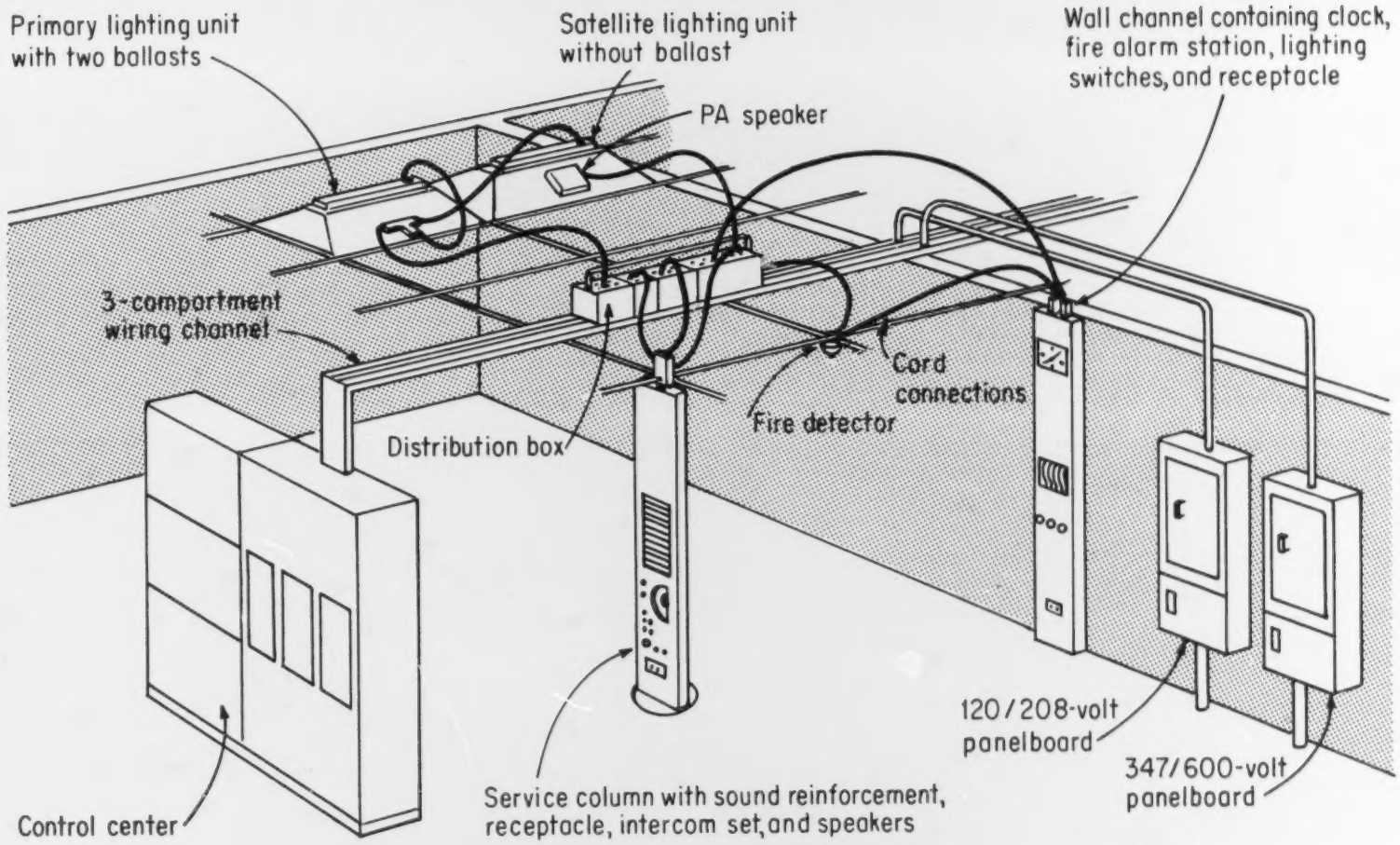
MANUFACTURERS OF ELECTRIC/ELECTRONIC DISTRIBUTION SU

1. American Modular Systems Design, Inc.
   179 Fifth Street
   Cambridge, Massachusetts 02141
   Contact: Mr. Nils J. Johnsson
   (617) 547-5100

2. Bedard-Girard Ltd.
   117 Lagauchetiere Street West
   Montreal, Quebec, CANADA

3. Electro-Link Systems Ltd.
   819 Alness Street
   Downsview, Ontario, CANADA
   Contact: Mr. Paul Stoneman, President
   (416) 630-8800

4. The Wiremold Company
   West Hartford, Connecticut 06110


Primary lighting unit with two ballasts
Satellite lighting unit without ballast
PA speaker
Wall channel containing clock, fire alarm station, lighting switches, and receptacle
3-compartment wiring channel
Cord connections
Fire detector
Distribution box
Control center
Service column with sound reinforcement, receptacle, intercom set, and speakers
120/208-volt panelboard
347/600-volt panelboard

Electric/Electronic Distribution System developed by Electro-Link Ltd. for SEF Program.

RERS OF ELECTRIC/ELECTRONIC DISTRIBUTION SUBSYSTEM

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